

SEP 11 2007

0008-FA-US

09/748,714

Appendix A

1. (Previously Presented) A method of forming a material, said method comprising:
 - (a) providing at least one energy source derived from a chemical reaction(s), said at least one energy source being the predominant source of energy for said method;
 - (b) feeding a precursor material along a first path into a localized environment of the at least one energy source under conditions that said energy source causes combustion of at least one component of said precursor material to produce combustion products that continue along said first path; and
 - (c) providing at least one redirecting gas flow source and applying the at least one redirecting gas flow to the first path combustion products, to thereby redirect the combustion products from the first path to a redirected path at an angle relative to said first path, to thereby cause the combustion products to contact a surface and form at least part of the material.
2. (Previously Presented) The method of claim 1, wherein causing the combustion products to contact a surface includes contacting a substrate to form a coating of the material thereon.
3. (Original) The method of claim 2, wherein the coating is formed less than 5 microns in thickness.
4. (Original) The method of claim 2, wherein the coating is formed less than 0.5 microns in thickness.
5. (Cancelled).
6. (Previously Presented) A method of forming a material, said method comprising:
 - (a) providing at least one energy derived from a chemical reaction(s), said at least one energy source being the predominant source of energy for said method;
 - (b) providing a liquid precursor material;
 - (c) feeding a liquid precursor material into a localized environment of the at least one energy source under conditions that said energy source causes combustion of at least one component of said precursor material to produce combustion;
 - (d) directing the combustion products along a first path; and

0008-FA-US

09/748,714

(e) providing at least one source of pressure differential and applying the at least one source of pressure differential to the localized environment of the at least one energy source, such that the localized environment is selectively changed to redirect the combustion products from the first path to a redirected path at an angle relative to said first path, to thereby cause the combustion products to contact a surface and form at least part of the material.

7. (Previously Presented) The method of claim 6, wherein applying to the localized environment the at least one source of pressure differential includes diluting combustion product gasses by at least 10%.

8. (Previously Presented) The method of claim 6, wherein applying to the localized environment the at least one source of pressure differential includes diluting combustion product gasses by at least 30%.

9. (Previously Presented) The method of claim 6, wherein applying to the localized environment the at least one source of pressure differential includes diluting combustion product gasses by at least 60%.

10. (Previously Presented) The method of claim 6, wherein applying to the localized environment the at least one source of pressure differential includes diluting combustion product gasses by at least 100%.

11. (Previously Presented) The method of claim 6, wherein the change to the localized environment caused by providing the at least one source of pressure differential includes cooling combustion product gasses by at least 10% compared to the temperature of the energy source relative to the temperature of the surface.

12. (Previously Presented) The method of claim 6, wherein the change to the localized environment caused by providing the at least one source of pressure differential includes cooling combustion product gasses by at least 25% compared to the temperature of the energy source relative to the temperature of the surface.

13. (Previously Presented) The method of claim 6, wherein the change to the localized environment caused by providing the at least one source of pressure differential includes cooling combustion product gasses by at least 50% compared to the temperature of the energy source relative to the temperature of the surface.

0008-FA-US

09/748,714

14. (Previously Presented) The method of claim 6, wherein the change to the localized environment caused by providing the at least one source of pressure differential includes cooling combustion product gasses by at least 70% compared to the temperature of the energy source relative to the temperature of the surface.

15. (Original) The method of claim 1, wherein the localized environment is within 20cm of the energy source.

16. (Original) The method of claim 1, wherein the localized environment is within 10cm of the energy source.

17. (Original) The method of claim 1, wherein the localized environment is within 5cm of the energy source.

18. (Original) The method of claim 1, wherein the localized environment is within 2cm of the energy source.

19. (Previously Presented) The method of claim 6, wherein the localized environment comprises a pressurized environment having any pressure between 1-10,000 torr.

20. (Previously Presented) A method of forming a material, said method comprising:

(a) providing at least one energy source derived from a chemical reaction(s), said at least one energy source being the predominant source of energy for said method;

(b) feeding a precursor material into a localized environment of the at least one energy source under conditions that said energy source causes combustion of at least one component of said precursor material to produce combustion products,;

(c) directing the combustion products along a first path; and

(d) providing at least one source of pressure differential and applying the at least one source of pressure differential to the localized environment of the at least one energy source, such that the localized environment is selectively changed to redirect the combustion products from the first path to a redirected path at an angle relative to said first path, to thereby cause the gasses combustion products to contact a surface and form at least part of the material in an atmospheric environment.

21. (Previously Presented) A method of forming a material, said method comprising:

(a) providing at least one energy source derived from a chemical reaction(s), said at least one energy source being the predominant source of energy for said method;

0008-FA-US

09/748,714

(b) feeding a precursor material within gasses, the gasses including liquid that is at least partially vaporized, into a localized environment of the at least one energy source, to allow the at least one energy source to cause combustion of the precursor material and/or the gasses and thereby produce combustion products;

(c) directing the combustion products along a first path; and

(d) providing at least one source of pressure differential and applying the at least one source of pressure differential to the localized environment of the at least one energy source, such that the localized environment is selectively changed to redirect the combustion products from the first path to a redirected path at an angle relative to said first path, to thereby cause the combustion products to contact a surface and form at least part of the material.

22. (Previously Presented) A method of forming a material, said method comprising:

(a) providing at least one combustion source derived from a chemical reaction(s), said at least one energy source being the predominant source of energy for said method;

(b) feeding a precursor material into a localized environment of the at least one combustion source, to allow the at least one combustion source to activate the precursor material within gasses and thereby produce combustion products;

(c) directing the combustion products along a first path; and

(d) providing at least one source of pressure differential and applying the at least one source of pressure differential to the localized environment of the at least one combustion source, such that the localized environment is selectively changed to redirect the combustion products from the first path to a redirected path at an angle relative to said first path, to thereby cause the combustion products to contact a surface and form at least part of the material.

23. (Previously Presented) The method of claim 22 wherein providing at least one source of pressure differential comprises providing at least one source of pressurized fluid.

24. (Original) The method of claim 23 wherein the pressurized fluid is a gas.

25. (Previously Presented) The method of claim 24 wherein the pressurized gas is directed close to, but not directly at the at least one combustion source, thereby forming the pressure differential that redirects the combustion products toward the surface.

0008-FA-US

09/748,714

26. (Previously Presented) The method of claim 24 wherein the pressurized gas intercepts the gas flow out of the at least one combustion source, thereby redirecting the combustion products toward the surface.
27. (Original) The method of claim 23 wherein the pressurized fluid contains a liquid.
28. (Previously Presented) The method of claim 23 wherein:
- (a) the pressurized fluid comprises an additional precursor; and
 - (b) the combustion source causes the additional precursor to react to create additional combustion products that form at least part of the material.
29. (Original) The method of claim 23 wherein:
- (a) the pressurized fluid comprises additional material; and
 - (b) the additional material forms at least part of the formed material.
30. (Previously Presented) The method of Claim 1 further including a second energy source to promote said chemical reaction(s).
31. (Previously Presented) The method of claim 22 wherein the at least one source of pressure differential includes at least one source of vacuum.
32. (Previously Presented) The method of claim 22 wherein the at least one source of pressure differential includes at least two sources of pressure differential.
33. (Original) The method of claim 32 wherein the at least two sources of pressure differential includes at least one source of vacuum and at least one source of pressurized fluid.
34. - 98. (Canceled).
99. (Previously Presented) The method of claim 21, wherein the localized environment comprises a pressurized environment having any pressure between 1-10,000 torr.
100. (Previously Presented) The method of claim 22, wherein the localized environment comprises a pressurized environment having any pressure between 1-10,000 torr.
101. (canceled).
102. (Currently Amended) The method of Claim ~~101~~ 1 ~~wherein causing the combustion products to contact a surface includes contacting a substrate to form wherein said material forms a coating of the material thereon on said surface.~~
103. (Previously presented) The method of Claim 102 wherein the coating is less than 5 microns in thickness.

0008-FA-US

09/748,714

104. (Currently Amended) The method of Claim 102 wherein the coating is less than 0.5 micron ~~microns~~ in thickness.